DETAILED ACTION

1. This office action is in response to applicant's Remarks filed on 07/24/2009.

Claims 1, 60 and 82 are amended.

Claims 81 and 83-84 are cancelled

Response to Arguments

2. Applicant's arguments filed 07/24/2009 have been fully considered but they are not persuasive.

In response to applicant's argument in claim 42 and 60 that the combination of prior art does not teach "wherein the router is separate from both the RNC and the Node Bs and wherein the router is in a communication traffic path between the RNC and the at least one Node B".

The examiner respectfully disagrees for several reasons. Firstly, the examiner must give each claim its broadest reasonable interpretation.

a) Kiiski teaches the mobile station simultaneously communication with three base station (B1-B3) wherein the base station transmitting data/information to Macro Diversity Combining (MDC) that splitting the down link DCH traffic data/information, see fig.1 clearly indicated the Macro Diversity Combining (MDC) located between the RNC and Node B (Base station).

b) Cheng et al. put forth to cure the limitation of "routers" that route data over such networks, channels, links or paths. Further, teach the system 100 employ routers between the Node Bs and the RNC 138, see paragraphs [0021-0022].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 42-43, 46, 52-54, 56-61, 64, 70-73, 75-80 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 2003/0161284 A1) in view of Kiishi et al. (US 2002/0126664 A1) and further view of Cheng et al. (US 2005/0043045 A1).

Consider **claims 42, 60, (82** A usable medium, storing…**).** Chen teaches a router in an Internet Protocol, IP, based UMTS Terrestrial Radio Access Network, UTRAN, Transport Network within a Universal Mobile Telecommunication System (Paragraphs [0016], [0031] teach UMTS system wherein contain radio network controller, IP, node b), the UTRAN transport network carrying Dedicated Channel (DCH) frames on DCHs between a RNC and at least one Node B, the router comprising (Paragraphs [0067-0072], Fig1, Illustrate and teach the connection through UTRAN which involve **routing** through one or more RNC, nobe-B, see paragraph [0007-0008]).

- *The examiner notes Chen teaches soft handover and use Marco-Diversity Combining for routing/splitting.*

Chen teaches the claimed limitation as discussed above **but is silent on**

means for splitting one input downlink DCH traffic flow originating from the RNC into at least two output downlink DCH traffic flows by using an IP multicast protocol,

wherein each output downlink DCH flow carries user data destined to a same end user equipment, and

wherein the router is separate from both the RNC and the Node Bs, and wherein the router is in a communication traffic path between the RNC and the at least one Node B

In an analogous art, **Kiiski teaches** means for splitting one input downlink DCH traffic flow originating from the RNC into at least two output downlink DCH traffic flows by using an IP multicast protocol,

wherein each output downlink DCH flow carries user data destined to a same end user equipment, (Paragraphs [0025], [0042] , [0055-0056], Fig.1 show RNC that having Macro Diversity Combining (MDC) wherein splitting the down link DCH traffic to Node b (BS1-BS3), further node b output down link to mobile station (MS)). It would have been obvious at the time that the invention was made to modify Chen with Kiishi's system such that routing the IP from RNC to Node B and to Mobile station that carrying Dedicate Channel in order to increase the efficiency of traffic transmission in internet protocol with low cost. However, the combination of Chen and Kiishi are **silent on**

wherein the router is separate from both the RNC and the Node Bs and wherein the router is in a communication traffic path between the RNC and the at least one Node B

In an analogous art, **Cheng teaches** wherein the router is separate from both the RNC and the Node Bs and wherein the router is in a communication traffic path between the RNC and the at least one Node B (Paragraph [0021-0022] teach the router that located between Node B and RNC).

Therefore, it would have been obvious at the time that the invention was made to modify Chen and Kiishi with Chen's system such that wherein the router is separate from both the RNC and the Node Bs in order to provide multiple routing to different node that helping the user communicate to the strongest node.

Consider **claims 43 and 61**. The combination of Chen and Kiishi and Cheng teach the router according to claim 42 and 60, further Kiishi teaches wherein the router comprises means for replicating each DCH frame of the input downlink DCH traffic into a corresponding DCH frame of each output downlink DCH traffic flow and means for transmitting the replicated DCH frames of all output downlink DCH traffic flows according to the IP multicast protocol (Paragraphs [0025], [0042] , [0055-0056], Fig.1 show RNC that having Macro Diversity Combining (MDC) wherein splitting the down link DCH traffic to Node b (BS1-BS3), further node b output down link to mobile station (MS)).

Consider **claims 46 and 64**. The combination of Chen and Kiishi and Cheng teach the router according to claim 42 and 60, further Chen teaches

wherein each DCH traffic flow is assigned a dedicated multicast destination address in the at least one Node B (Paragraphs [0067]).

Consider **claims 52 and 70**. The combination of Chen and Kiishi and Cheng teach the router according to claim 42 and 60, further Chen teaches comprising: means for identifying DCH frames belonging to different uplink DCH traffic flows by means of utilization of a multicast address, assigned as the downlink destination address, as a source address of the DCH frames sent in the uplink DCH traffic flows from all participating Node Bs (Paragraphs [0060-0063]).

Consider **claims 53 and 72**. The combination of Chen and Kiishi and Cheng teach the router according to claim 42 and 60, further Chen teaches comprising: means for identifying DCH frames belonging to different uplink DCH traffic flows by retrieving a destination address and the destination port(s) of the uplink flows from the RNC (Paragraphs [0054], [0060-0063]).

Consider **claims 54 and 73**. The combination of Chen and Kiishi and Cheng teach the router according to claim 42 and 60, further Chen teaches comprising :means for identifying DCH frames belonging to different uplink DCH traffic flows by using an uplink flow identity implicit in a downlink DCH traffic flow (Paragraphs [0060-0063]).

Consider claims **56 and 77.** The combination of Chen and Kiishi and Cheng teach the router according to claim 42 and 60, further, Kiishi teaches wherein the router comprises means for combining at least two uplink DCH traffic flows into one single uplink DCH traffic flow (Fig.1 show DMC that combining at least two uplink DCH traffic flows).

Consider **claims 57 and 78**. The combination of Chen and Kiishi and Cheng teach the router according to claim 56 and 77, further Chen teaches wherein the means for combining comprises further means for building a new DCH frame from a received set of DCH frames in the at least two uplink DCH traffic flows to be combined, encapsulating the new DCH frame in a UDP packet and sending the UDP IO packet in the uplink direction (Paragraphs [0054], [0060-0063]).

Consider **claims 59 and 80**. The combination of Chen and Kiishi and Cheng teach the router according to claim 42 and 60, further Chen teaches comprising: means for estimating a Latest Accepted Time of Arrival (LAToA) for a next set of DCH frames to be combined having a Connection Frame Number n (CFNn) based on times of arrival of the previous set of frames having a CFN n-1, and means for adjusting the estimates of the LAToA for each new frame adapted to a maximum transport delay that a frame can experience under normal circumstances on its path from the at least one Node B to the router (Paragraphs

[0063], [0074-0080]).

Consider **claims 71 and 75**. The combination of Chen and Kiishi and Cheng teach the method according to claim 70, further Chen teaches comprising: identifying an originating Node B of an uplink DCH frame, based on a destination IP address and a destination UDP port assigned by the RNC to the Node B for the uplink of the DCH (Paragraph [0048-0049]).

5. Claims 44-45, 47-51, 55, 62-63, 65-69, 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 2003/0161284 A1) in view of Kiishi et al. (US 2002/0126664 A1) in view of Cheng et al. (US 2005/0043045 A1) and further view of Haggerty (US 6,331,983).

Consider claims **44 and 62**. The combination of Chen and Kiishi and Cheng teach the router according to claim 42 and 60, **but is silent on** wherein the IP multicast protocol is a Core Based Trees Multicast Routing version 2, CBTv2 protocol.

In an analogous art, **Haggerty teaches** wherein the IP multicast protocol is Core Based Trees Multicast Routing version 2, CBTv2 (Col. 6, lines 53-54)

It would have been obvious to one skilled in the art at the time of the invention was made to modify Chen and Kiishi and Cheng with Haggerty's system, such that he IP multicast protocol is Core Based Trees Multicast Routing

version 2, CBTv2 to provide means for transmit traffic to all member of its destination with the dame quality and reliable.

Consider **claims 45 and 63.** The combination of Chen and Kiishi and Cheng with Haggerty teach the router according to claim 42 and 60, further Haggerty teaches wherein the IP multicast protocol is Protocol Independent Multicast-Sparse Mode (PIM-SM) protocol (Col. 6, lines 53-55).

Consider **claims 47 and 65**. The combination of Chen and Kiishi and Cheng with Haggerty teach the router according to claim 46 and 60, further Haggerty teaches wherein the means for splitting further comprises means for identifying a mapping between the RNC and the multicast destination address by using CBTv2 or PIM-SM bootstrap mechanism (Col. 7, lines 45-59, Col. 18, lines 30-35).

Consider **claims 48 and 66**. The combination of Chen and Kiishi and Cheng with Haggerty teach the router according to claim 42 and 60, further Haggerty teaches further comprising means for determining whether the router is a splitting and/or combination router by using the protocol(s) CBTv2 and/or MLD, wherein the protocol(s) are/is arranged to determine the number of listeners for a specific multicast destination address (Col.11, lines 45-55, Col.13, lines 56-56).

Consider **claims 49 and 67**. The combination of Chen and Kiishi and

Cheng and Haggerty teach the router according to claim 42 and 60, further Haggerty teaches further comprising: means for determining whether the router is a splitting and/or combination router by using protocol(s) PIM-SM and/or MLD wherein the protocol(s) are/is arranged to determine a number of listeners for a specific multicast destination address (Col.11, lines 45-55, Col.18, lines 30-36).

Consider **claims 50, 51, 68 and 69**. The combination of Chen and Kiishi and Cheng and Haggerty teach the router according to claim 42 and 60, further Haggerty teaches further comprising: means for determining whether the router is a splitting and/or combination router by using the protocol(s) PIM-SM and/or Internet Group Management Protocol, IGMP, wherein the protocol(s) are/is arranged to determine a number of listeners for a specific multicast destination address (Col.11, lines 45-55, Col.4, lines 56-63).

Consider **claims 55 and 74**. The combination of Chen and Kiishi and Cheng and Haggerty teach the router according to claim 42 and 60, further Haggerty teaches wherein the router comprises means for identifying DCH frames belonging to different uplink DCH traffic flows by modifying MLD or IGMP protocol and a multicast routing protocol such that a destination port of an uplink is included in messages that are used to build a multicast tree (Col.5, lines 10-34).

Allowable Subject Matter

6. Claims 58 and 79 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIET DOAN whose telephone number is (571)272-7863. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles N. Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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